

7.1 Multiplying and Dividing Monomials

Multiply

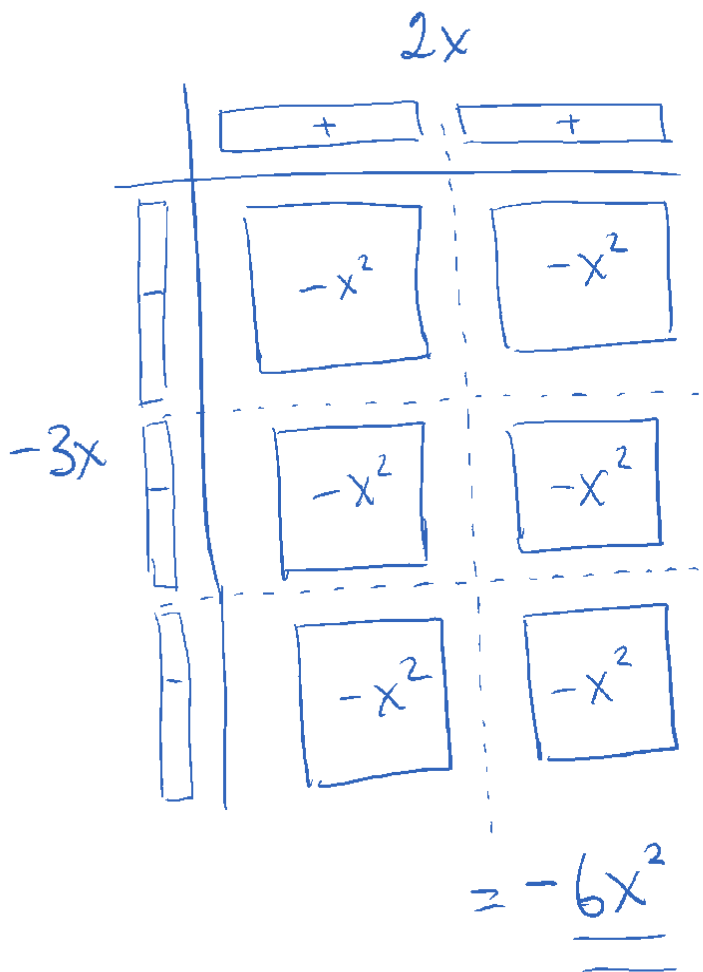
a) $(-3x)(2x)$

or \rightarrow alg tiles \rightarrow

\downarrow
algebraically

$$= (-3)(2)(x)(x)$$

$$= \underline{\underline{-6x^2}}$$



b) $(4x)(2y) = (4)(2)(x)(y)$
 $= 8xy$

$\left. \begin{array}{l} 2 \cdot 3 = 6 \\ 3 \cdot 2 = 6 \end{array} \right\}$

c) $(11x)(2x^2) = (11)(2)(x)(x^2)$
 $= 22x^3$

d) $(-5y^2)(-2y^4) = 10y^6 \checkmark$

Divide

a) $8y^2$

$? = 4y$

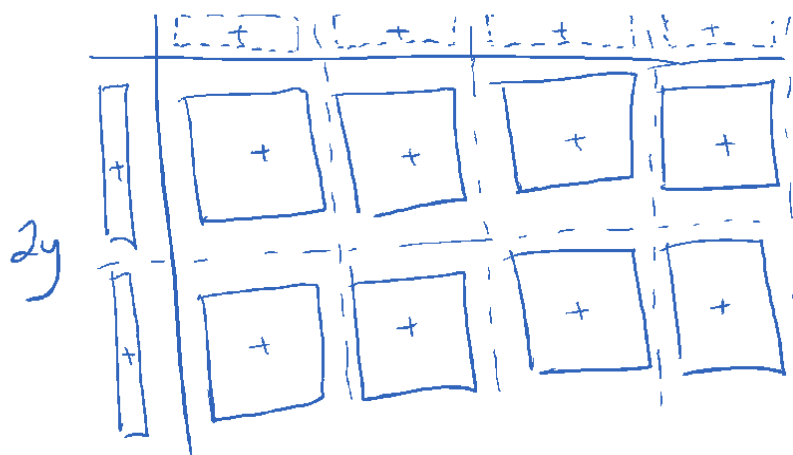
$4y$	$4y$	$4y$	$4y$
$4y$	$4y$	$4y$	$4y$

$$a) \frac{8y^2}{2y} \rightarrow \text{alg tiles}$$

or
algebraically

$$\left(\frac{8y^2}{2y} \right) = \frac{4y^{2-1}}{1} = 4y$$

$$\frac{\cancel{4} \cancel{8} y^2}{\cancel{2} y} = 4y$$



$$(2y)(4y) = 8y^2$$

$$\frac{8y^2}{2y} = 4y$$

$$\frac{8y^2}{2y} = \frac{\cancel{4} \cancel{8} y^2}{\cancel{2} y} = 4y$$

$$b) \frac{\cancel{4} \cancel{12} x y}{\cancel{3} y} = 4x$$

$$c) \frac{\cancel{6} \cancel{18} x^2}{\cancel{-3} x} = 6x \leftarrow$$

$$-18x^2 \div -3x = \frac{-18x^2}{-3x}$$

$$d) \left(\frac{m^3 n^5}{m n^2} \right) = m^{3-1} n^{5-2} = m^2 n^3$$

$$\frac{-5x^{\frac{2}{3}}}{4y^2} \cdot \frac{3y^3}{2x} = \frac{-15x^{\frac{2}{3}} y}{8}$$

Practice pg 260

3, 5-10, 11ac, 12ab,
13-16 (no models needed)

17, 18, 21, 22